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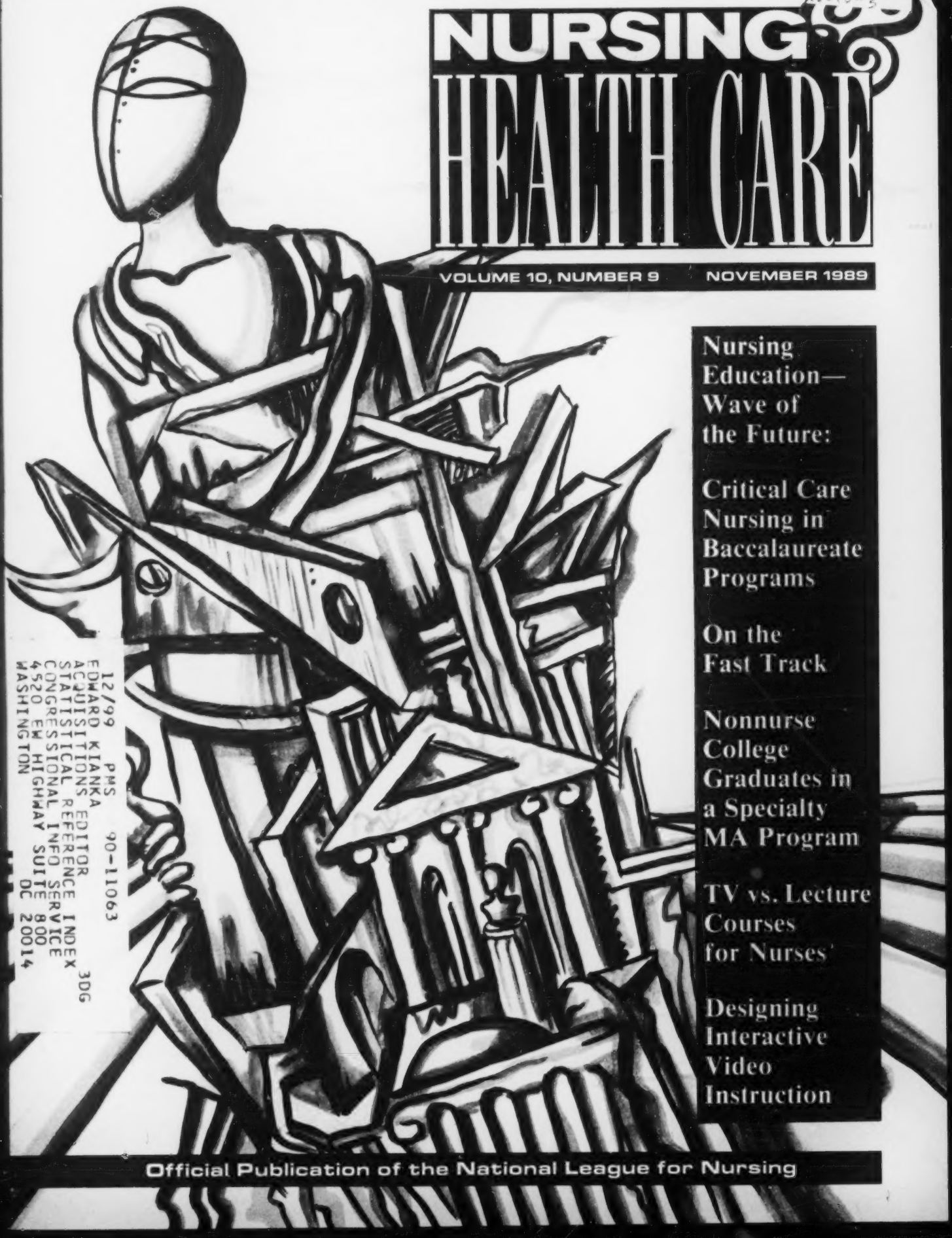

Nursing Education—Wave of the Future:

Critical Care Nursing in Baccalaureate Programs

On the Fast Track

Nonnurse College Graduates in a Specialty MA Program

TV vs. Lecture Courses for Nurses

Designing Interactive Video Instruction

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NURSING & HEALTH CARE

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CHANGE OF ADDRESS: The National League for Nursing moved on October 2nd, 1989 to new quarters at 350 Hudson Street, New York, NY 10014. The toll-free number 1-800-NOW-1-NLN, will remain the same. The local number is 212-989-9393. The new FAX number is 212-989-3710.

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Critical Care Nursing in Baccalaureate Programs

Christine A. Tanner, Jeanette Hartshorn, and Peri Rosenfeld

In today's hospital, critical care is fast becoming the norm rather than the exception. How well have our schools of nursing responded to this fact? Tanner, Hartshorn, and Rosenfeld survey schools and find mixed answers in spite of the AACN's directive favoring critical care nursing as an essential component in the baccalaureate program. As care needs change, will our schools plan for the future?

Key Words: critical care, curriculum, specialty education, generalist education, curriculum content, certification

Critical care nursing began to emerge as a specialty in the 1970s. At that time, coronary care units and intensive care units were few in number. Today, nearly all hospitals have critical care units. The education of the nurses who work in these units was, at first, "on the job" or provided through continuing education courses. Since those early days, the body of knowledge and research base in CCN has grown. Despite this growth, there is limited evidence of the inclusion of content specific to critical care in baccalaureate programs. Most of the data available are anecdotal and provide only examples of how this content is included in the curricula of some undergraduate programs. Experiences in offering elective or required courses in critical care have been reported by several authors (Clochesy, 1983; Geels, 1974; Mathew & Goodwin, 1983; Millen & Hufschmidt, 1984).

In 1984, the AACN identified inclusion of critical care content in undergraduate programs as a major area of focus. A position statement released that year entitled "Integration of Critical Care Nursing Concepts and Clinical Experiences Into Professional Nursing Programs" outlined a number of steps that should be used to accomplish the integration of concepts. Specifically, the statement documents the need for students in consultation with faculty and critical care practitioners, to utilize the nursing process in caring for the critically ill and their families. The statement confirms the need for appropriately prepared faculty (in both education and experience) to work with students. All of these changes should also be supported by a closer working relationship between faculty and staff.

Three years later, a position statement specifically outlined a mandate for inclusion of critical care content in baccalaureate programs. "Integration of Critical Care Nursing Concepts and Clinical Experiences Into Professional Nursing Programs" specifically notes the importance of including direct clinical experience in

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the care of the critically ill. The statement further recommends that the AACN "...in conjunction with baccalaureate schools of nursing and appropriate accrediting bodies" progress toward "...the development, implementation and evaluation of strategies to incorporate critical care content and direct clinical experiences in baccalaureate nursing curricula" (AACN, 1987).

"...faculty beliefs were the most important set of factors that create barriers to CCN in the baccalaureate curriculum. Of these, the belief that CCN is a specialty seems to figure most prominently."

The need for action directed toward CCN baccalaureate education was highlighted further by a study of critical care nurse supply and requirements, conducted by Levine and Associates for AACN in 1988. The study indicated a current "severe" shortage of critical care nurses, citing a 13.8% vacancy rate nationwide. The study further indicated that the current supply would have to be increased by 42% to 90% to meet the demand for critical care nurses in 1990; the shortage of baccalaureate and master's prepared nurses is even more acute, particularly in light of the need for "specialized experience and knowledge" and the ever increasing acuity of critically ill patients. Among the conclusions drawn from the study was the following:

> Although critical care requires considerable knowledge beyond basic nursing education, knowledge that according to survey respondents was not imparted in the basic programs, there appears to be little educational involvement beyond brief episodic continuing education programs. Higher education in critical care nursing is a relatively untapped area that promises great potential for improving the quality of care received by critical care patients. (AACN, 1988, p. 11)

Although education in critical care nursing is only one of many avenues to resolution of the nursing shortage in critical care areas, it is nevertheless an important one. There are currently no data on the extent to which critical care nursing is already included in the baccalaureate curricula, and little data on factors that facilitate or discourage its inclusion (Dunbar, 1986). The current study is designed to describe the current status of CCN education in baccalaureate nursing programs. The following questions guided this study:

1. To what extent are CCN content and experiences included in baccalaureate nursing programs?
2. What are the characteristics of CCN curricula at the baccalaureate level, in terms of the nature of the courses, and the amount of clinical experience?
3. What are the characteristics (educational preparation, CCN experience, and CCN certification) of faculty responsible for teaching CCN?
4. What is the quality of the critical care curriculum and the level of preparation of the graduates as perceived by faculty involved in critical care instruction?
5. What are the perceived barriers to incorporation of critical care content in the baccalaureate curriculum?
6. What are the relationships among the faculty characteristics, perceived barriers, nature and quantity of CCN course offerings, and perceived quality of the critical care curriculum?

Methods

Data on critical care nursing education were collected in the summer and fall of 1988 through a survey questionnaire sent to all 455 basic baccalaureate programs in the United States. Survey methodology was the most appropriate because it served two important functions. First, it was necessary to collect data from basic baccalaureate nursing programs (e.g., number of faculty, number of clinical hours) to understand the current status of CCN in the nation's undergraduate programs. In addition, in order to identify need for change, some initial measures were needed to evaluate the perceived quality of the current CCN curricula and to assess obstacles in developing and implementing such curricula.

Questionnaire

The questionnaire was developed by the investigators for this study. One investigator and members of the AACN Task Force prepared an initial draft; it was reviewed by six individuals knowledgeable about CCN education and practice. The final instrument consisted of five sections: (1) respondent information; (2) information about faculty responsible for clinical teaching in CCN; (3) critical care preparation at the baccalaureate level, including (a) the form in which CCN content and experiences were offered (separate course, or included in other courses); (b) the credit hours and contact hours in clinical practice; (c) the nature of clinical experiences (observation or provision of care); and (d) student-faculty ratio; (4) evaluation of the CCN curriculum, including the faculty's perception of new graduates' ability to practice CCN; and (5) perceived barriers to the inclusion of CCN in the baccalaureate program.

Scale scores were derived for two variables: evaluation of the CCN curriculum and perceived barriers to inclusion of CCN content. Evaluation of the CCN curriculum was comprised of two subscales: (1) the faculty perception of the new graduates' ability to practice CCN was a single item, rated on 4 points from "not at all prepared to begin practice in the care of the critically ill" to "can care for critically ill patients independently;" and (2) evaluation of theory and clinical experiences was comprised of the total score on four items, each rated on a 5-point scale from adequate to inadequate. Internal consistency reliability for this 4-item scale was .89.

The perceived barriers scale was comprised of three subscales: (1) barriers caused by faculty beliefs was comprised of four items representing views of the total faculty that might prevent or discourage the inclusion of CCN in the curriculum; (2) barriers related to clinical agency policy contained four items representing the adequacy and availability of clinical facilities for CCN experiences; and (3) barriers related to faculty preparation was comprised of three items related to the clinical expertise of the faculty in CCN. Each of these 11 items on the barrier scale was rated on a 4-point scale of importance in

influencing curriculum decisions, from "not a factor at our school" to "very important." Coefficient alphas for the three subscale scores were, respectively, .68, .74, and .65; for the total scale, the coefficient alpha was satisfactory at .75.

Sample

In order to reflect the most comprehensive portrayal of baccalaureate nursing education, the survey was sent to the entire universe of basic baccalaureate programs in the United States. The data base at the National League for Nursing (NLN) was used to identify the 455 state-approved baccalaureate nursing programs. The survey was addressed to the director/dean of the program, with the request that the survey be sent to the faculty member most familiar with critical care nursing. Two mailings yielded a response rate of 85%. Responses were coded and entered by a critical care nurse who was interning at NLN's Division of Research. Open-ended questions were evaluated through content analysis.

Of the 385 respondents, 167 (43.5%) were directly involved in the CCN curriculum, either as a faculty member or as coordinator of the course that includes critical care nursing content. Of these, 29 (17.4%) held a doctorate as their highest degree, 142 (85%) declared medical-surgical nursing as their specialty, and 34 (20.4%) were currently certified in critical care nursing (CCRN), and an additional 12 (7.2%) had been certified at one time. This group of respondents was quite experienced in the care of the critically ill; 101 (60.5%) had more than 5 years of experience and 41 (24.6%) had 3–5 years of experience. Fifty-nine (36.4%) are currently practicing, while an additional 30 (18.5%)) have had experience within the last 1–2 years.

Results and discussion

Inclusion of CCN in the baccalaureate curriculum: Of the 385 returned questionnaires, 371 contained usable responses to questions about the critical care curriculum. A surprisingly large percentage of programs offered some content on critical care nursing: 353 (95.2%). Ninety-three (25%) offered it as a separate course, 192 (51.5%) included it in other courses, and 69 (17.9%) included it in both a separate course and in other courses.

Nature of the CCN curriculum

Separate CCN courses: Of those 93 programs offering a separate course, in 74 programs (80.4%) the course was required. For programs on a semester system (78), the range of credit hours was from 2 to 12, with a mean of 5.5. For programs on a quarter system (9), the range of credit hours was from 2 to 9, with a mean of 4.67. In most instances, the course was offered in the senior year (87%) or in both the junior and senior years (7%). It includes a clinical component (95%) with opportunities for providing care (95% of those with a clinical component). The total number of clinical hours ranged from 6 hours to 272 hours. The average number of clinical hours was 103, with a standard deviation of 52.

The faculty student ratio for these separate courses with a clinical component ranged from one to one to one to 12. The mean was one faculty to 7.5 students, with a standard deviation of 2.3 students.

Table 1: *Mean, Standard Deviation and Proportion of Respondents Identifying Barriers to CCN in the Baccalaureate Curriculum*

FACTOR	*Mean*	*SD*	*Percentage*
Faculty beliefs that:			
CCN is a specialty and the goal of BSN curriculum is to prepare specialists	2.06	1.08	69.3*
Critically ill patients are too sick to be cared for by undergraduate students	1.09	0.97	32.8
CCN is too technological	0.98	0.98	27.0
Curriculum design does not allow inclusion of another course	1.63	1.31	53.6
Experiences limited because:			
Agency policy does not allow students to provide care in the critical care units	0.54	0.93	15.5
Agency requires a student-to-faculty ratio that cannot be achieved in our program	0.75	1.10	21.8
Nursing staff cannot serve as preceptors for our undergraduate students	0.72	1.02	21.0
There are not enough critical care units in which our students can obtain experience	0.66	1.05	18.6
Faculty preparation is limited because:			
There is limited opportunity for practice	0.92	1.07	29.1
Clinical expertise is not as valued as other aspects of the faculty role	1.10	1.22	34.4
We have difficulty recruiting critical care experts into faculty roles	1.16	1.14	35.7

*Percentage of respondents who identified these factors as important or very important as barriers to CCN in the baccalaureate curriculum.

Both separate and integrated CCN courses

Two-hundred and sixty-one (261) programs either included CCN in other courses or offered a separate course *and* included CCN in other courses. Respondents from 244 of these programs provided additional information. In 106 (43%), CCN content was

included in only one course. In 98 (40%), it was included in two courses, while in 40 (16%) it was included in three or more courses.

Similar to programs with separate courses, programs offered integrated courses most frequently in the senior year (50%) or in both the junior and senior years (35%). Most (82%) included a clinical component with opportunities for providing care (90% of those that had a clinical component). The number of total clinical hours ranged from 2 to 270, with a mean of 66 hours and a standard deviation of 56. Clinical instruction was provided in one of two models: (1) the faculty member's only responsibility for supervision was for students in the critical care units (46%) or (2) faculty supervised students both in the critical care unit and on other units (54%). The average faculty-student ratio was about the same in both situations: one faculty member to every 7.6–7.8 students.

Characteristics of CCN faculty

An average of nearly three faculty in each school were involved in CCN instruction. The reported range for the number of faculty was from one to 18. Approximately 25% of all faculty teaching CCN held doctoral degrees (13% in nursing, 12% in other fields). Approximately 25% of all faculty are reported by the respondents to be certified by the AACN (CCRN). The faculty were also reported to have extensive experience: 65% had more than 5 years of experience in critical care nursing practice.

Quality of CCN curriculum

Respondents were asked to evaluate the adequacy of four areas of the CCN curriculum: (1) time allotted to CCN theory, (2) the depth of CCN theory, (3) time allotted to gain experience in CCN practice, and (4) availability of clinical learning experiences. A majority rated all of these aspects as "somewhat adequate" to "adequate." Time allotted to theory seemed to be a problem in 19.1% of the programs; depth of theory was judged to be less than adequate in 18.9% of the programs. Availability of clinical learning experiences is a problem in 17.3% of the programs. However, the time allotted for clinical experience is judged to be less than adequate by 31% of the respondents.

Nearly 1 in 10 (9.4%) of the respondents indicated that graduates of the BSN program were not at all prepared to begin practice in the care of the critically ill. A majority (232, or 60.9%) felt that graduates would need substantial additional orientation to care for the critically ill. One hundred and two (26.8%) of the respondents indicated that graduates would need minimal additional orientation to care of the critically ill, while only one respondent felt that new graduates could care for critically ill patients independently.

Barriers to incorporation of CCN in the baccalaureate curriculum

Respondents were asked to identify which factors adversely affected decisions about inclusion of CCN in the curriculum. The responses are summarized by item in Table 1. The items are rated on a 3-point scale, with zero not being a factor and 3 being a very important factor. The means indicate to some extent which factors stand out as the more important barriers, e.g., a mean of 2 would suggest that a factor is somewhat important in decisions about inclusion of CCN in the curriculum. In addition, Table 1 indicates the proportion of respondents who reported each factor as being either important or very important. Both analyses clearly show that faculty beliefs were the most important set of factors that create barriers to CCN in the baccalaureate curriculum. Of these, the belief that CCN is a specialty seems to figure most prominently.

The questionnaire also included two open-ended questions, asking respondents to identify additional barriers and facilitators to the inclusion of CCN in the baccalaureate curriculum. The responses related to barriers fell into eight categories: (1) not enough faculty with critical care expertise, (2) generalist orientation of undergraduate curricula, (3) student faculty ratio, (4) time limitations in the curriculum, (5) limitations in clinical agencies, (6) lack of texts written for beginning critical care practice, (7) lack of defined curricular content by NLN/ANA, and (8) lack of bachelor's prepared preceptors. Facilitators included the following: (1) faculty commitment, (2) acknowledgment of increased need for this area of practice, (3) students' interest and demand for ICU experiences, (4) good marketing for school, (5) demand for graduates to be prepared in ICU practice, (6) availability of clinical settings, (7) questions on state board exams, (8) use of certain models or theories, and (9) graduate programs in the school specific to critical care.

Table 2. *Correlations Among Characteristics of CCN Courses, Barriers, and Quality of CCN Curriculum and New Graduate Preparation*

	Barriers to Inclusion				*Perceived*	
Quality	*Total*	*FB*	*AP*	*FE*	*CCN Curr*	*Grad*
Characteristics						
Nature of CCN	.15	−.18	−.04	−.07	−.15*	.08
Number of Hours	−.25*	−.25*	−.15	−.11	.40*	.24*
SF Ratio	−.10	−.04	−.06	−.11	.05	.08
N of Faculty	−.01	.12	−.12	.00	−.11	.10
Barriers						
Total	1.00	.8*	.61*	.68*	−.54*	−.15*
FB		1.00	.27*	.29*	−.32*	−.18*
AP			1.00	.14	−.43*	−.15*
FE				1.00	−.39*	−.05

*$p < .05$.

Relationships among the characteristics of CCN courses, barriers and perceived quality of the critical care curriculum

To determine the extent to which relationships exist among selected characteristics of the CCN courses, the perceived degree of barriers, and the perceived quality of the CCN curriculum, Pearson's Product-Moment Correlation Coefficients were computed (see Table 2).

Characteristics of CCN courses and faculty that were considered include: (1) nature of the curriculum measured on an ordinal scale (0 = not included, 1 = separate course, 2 = integrated in one or more additional courses, 3 = both integrated and separate courses); (2) total number of clinical hours; (3) the student-faculty ratio; and (4) the total number of faculty involved in teaching CCN. The barriers variables were the total barriers score, and the subscale scores on faculty beliefs (FB), agency policy (AP), and faculty experience (FE). The perceived quality was the overall evaluation of the CCN curriculum (CCN CURR) and the preparation of the graduate for practice in CCN (Grad). The only program characteristic that was related to perceived quality was the number of clinical hours. Whether CCN was included in a separate course, integrated, or in more than one course apparently had no relationship to the perceived quality. Also of interest is that the student-faculty ratio was unrelated to both perceived quality and barriers to inclusion.

Barriers to inclusion of CCN content are negatively related to the number of clinical hours. All other subscale scores on barriers were negatively related to the perceived quality of the program. In other words, the fewer the perceived barriers to inclusion of CCN, the higher the quality. These findings are not surprising.

Discussion

According to these survey results, a surprisingly large proportion of U.S. baccalaureate nursing programs include some critical care nursing content in their curricula. The faculty-student ratios tend to be low. The faculty involved in CCN education are well educated and quite experienced; nearly a quarter hold the doctoral degree and/or are certified in critical care nursing practice. Nearly two-thirds have more than 5 years of experience in CCN.

Yet despite these results, there are several indications of the dilemmas that nurse educators face regarding inclusion of CCN content. These dilemmas are not unlike those related to inclusion of content in any other particular area of nursing practice. First, there apparently is little agreement in the profession about what constitutes generalist practice and, therefore, what would constitute educational preparation for such a practice. Nearly 70% of the respondents in this survey indicated that faculty in their school believed that CCN is a specialty, and this belief inhibited inclusion of CCN content. Faculty also believe that the curricula are already packed with content, and inclusion of additional specialized areas of practice is neither possible nor desirable.

"According to these survey results, a surprisingly large proportion of U.S. baccalaureate nursing programs include some critical care nursing content in their curricula."

Whether or not CCN is considered a specialty, its inclusion in the basic undergraduate curriculum may be directed toward several goals: (1) preparing for beginning level practice in a critical care setting; (2) acquiring greater confidence and skill in nursing practice that would be applicable in many settings, including technical skills (Mathew & Goodwin, 1983; Millen & Hufschmidt, 1984), use of nursing process and conceptual frameworks (Dunbar, 1986; Millen & Hufschmidt, 1984), increased organizational skills, communication skills with physicians, abilities in decision making (Mathew & Goodwin, 1983), and improved coping ability in stressful situations (Clochesy, 1983); and (3) pursuing postgraduate education in critical care by having early positive exposure to critical care settings. Respondents were not asked to identify which, if any, of these goals were the basis for the CCN education in their respective programs. However, the tremendous variability in the nature and amount of CCN in the undergraduate curriculum suggests that different goals may be operating.

If the goal is to prepare graduates for beginning level practice in CCN, these data suggest that the goal is not being realized. Sixty-one percent of the respondents felt that graduates of their programs would need substantial additional orientation to care for the critically ill. There is no agreement within the profession about which of these goals are desirable for "generalist" preparation, nor which are achievable within the context of baccalaureate education. The AACN 1987 position statement suggests that baccalaureate graduates need to have the "knowledge and skills to practice at an entry level in the care of patients with complex problems and needs," but it stops short of explicitly recommending that they be prepared for entry level positions in critical care units.

Another dilemma implied by these survey results is the relationship between education and practice, specifically, faculty involvement in clinical practice to maintain their own competency and practicing nurses' participation in undergraduate education. Nearly one-third of the respondents indicated that there is limited opportunity for their own practice; nearly one-fifth of the respondents indicated that nursing staff cannot serve as preceptors for undergraduate students. These figures, when taken together, raise serious issues about the possibilities for quality clinical education in CCN as part of the baccalaureate program.

The issues raised by prior research and by this survey were discussed at an invitational conference hosted by the AACN in March 1989. The goals of this conference were: (1) to examine issues surrounding the inclusion of CCN content into the baccalaureate curriculum, (2) to achieve consensus on the need to integrate critical care nursing content into the baccalaureate curriculum, (3) to achieve consensus on the preparation of

nurses to care for critically ill patients, and (4) to develop recommendations and strategies regarding the educational preparation of nurses in CCN (proceedings from this conference are available from AACN, One Civic Plaza, Newport Beach, CA 92660). Participants in this conference included 120 nurses and nurse educators from 40 schools of nursing and associated clinical practice agency. Recommendations from the conference had been forwarded to the AACN Board of Directors for their action before this article went to press.

Conclusions

1. There is tremendous variability in the nature and amount of CCN in the undergraduate curriculum. The amount of critical care content, the way in which it is offered, and the required amount of clinical time varies tremendously from program to program.
2. Faculty generally rate the quality of the CCN offerings as being adequate, although the majority indicate that clinical time is somewhat less than adequate.
3. The faculty indicate that graduates from most of these baccalaureate programs would need substantial additional orientation before beginning to practice in CCN.
4. Nearly a quarter of the faculty involved in CCN instruction hold the doctoral degree and/or are certified. Nearly two-thirds have more than 5 years of experience in CCN.
5. Faculty report a wide variety of barriers to the inclusion of CCN in baccalaureate curricula. Both faculty beliefs about the place of CCN as a specialty and the role of baccalaureate education in the preparation of generalists, and requirements for low faculty-to-student ratios, present barriers to nearly half the respondents.

In summary, there is a need to resolve several issues related to inclusion of CCN in the baccalaureate curriculum. These include: (1) the nature of specialist versus generalist preparation; (2) the goals for inclusion of CCN, (as well as content related to any other area of practice which may be considered specialized); (3) the relationship between education and practice, and the responsibilities of each in educating competent practitioners to provide safe care to critically ill patients.

AACN recommendations

The AACN hosted an Invitational Conference on Critical Care Nursing in the Baccalaureate Curriculum in March 1989. Recommendations based on deliberations of the participants of that conference were forwarded to the AACN Board of Directors for their action. The following were recommendations approved by the AACN Board at their August 1989 meeting.

Actions of the American Association of Critical-Care Nurses Board of Directors Related to Critical Care Nursing in Undergraduate Education

In August 1989, the AACN Board of Directors approved the following actions:

1. To develop an essentials document that defines the essential competencies and content for differentiated levels of critical care nursing practice (associate, baccalaureate and graduate).
2. To develop and disseminate guidelines for roles of academic and service educators in the preparation of critical care practitioners.
3. To continue efforts to develop and disseminate educational resources to support the implementation of critical care content and experience in undergraduate and graduate programs.

References

AACN. (1984). Position paper: Integration of critical nursing concepts and clinical experiences into professional nursing programs. Newport Beach, CA: AACN.

AACN. (1987). Position paper: Need for critical care content and clinical experiences in baccalaureate nursing curricula. Newport Beach, CA: AACN.

AACN. (1988). *Summary analysis of critical care nurse supply & demand*. Newport Beach, CA: AACN.

Clochesy, J. M. (1983). Preparing senior nursing students through optional clinical experiences. *Dimensions of Critical Care Nursing, 2*(6), 366–370.

Dunbar, S. (1986). Imperatives for nursing education. *Heart and Lung, 15*(6), 18A–22A.

Geels, W. J., Brand, L. M., & Passos, J. Y. (1974). The ICU and collegiate nursing education. *Journal of Nursing Education, 13*(1), 15–20.

Mathew, D. M., & Goodwin, M. H. (1983). Critical care practicum. *Focus on Critical Care, 10*(1), 38–42.

Millen, D. L., & Hufschmidt, A. P. (1984). Preparing the undergraduate for critical care. *Dimensions of Critical Care Nursing, 3*(5), 307–312.

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